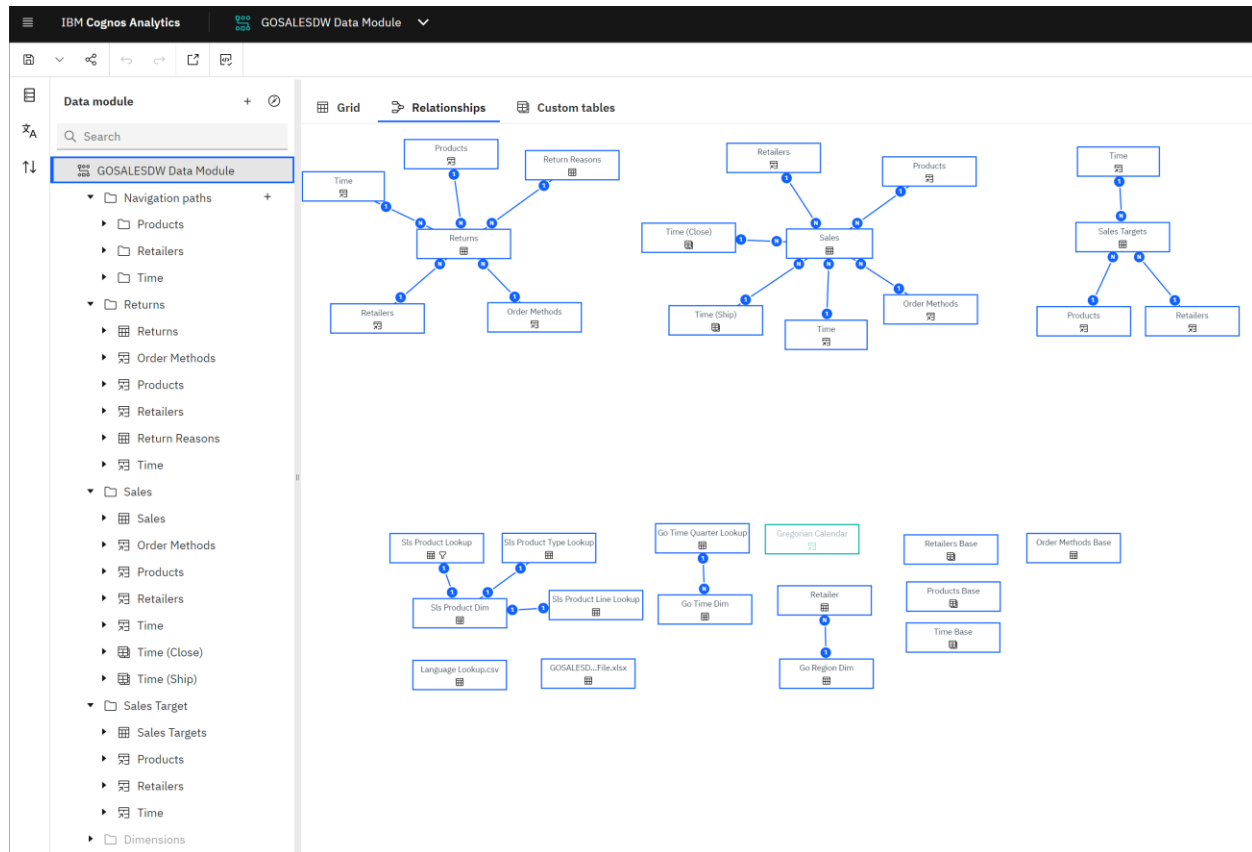# Data Module Best Practices Sample Model

This Data Module model was created using Cognos Analytics 12.0.2 and employs best practices against metadata via a Data Server connection. In this case, the data source is the GOSALESDW samples relational database.

The model provides an example of how to use shortcuts to create Star Schema groupings (fact tables with their related dimension tables) allowing authors to quickly see different areas of the business via folder organization and create multi-fact queries across the business using shared dimensions (dimension shortcuts with the same name in the different folders). The model consolidates certain dimensions using table views which are made up of multiple underlying tables. For example, Products Base is made up of Sls Product Lookup, Sls Product Type Lookup, Sls Product Line Lookup, and Sls Product Dim. Then shortcuts pointing to Products Base are used in the different business area folders (Returns, Sales, and Sales Targets) and those shortcuts are related to their fact tables on the appropriate keys.

The model uses relative time references to allow for relative time queries. For the relative time examples to work, you will need to use the _as_of_date parameter to set the current date to a date in the past. Since the GOSALEDW only has data between January 2010 and July 2013, you will need to set the

_as_of_date parameter to a date in this range. Then your relative time measures will return data as expected rather than no data. The model also has Navigation Paths defined to allow drill up and down functionality. To take advantage of this, author your dashboards and reports using the items from the Navigation paths folder. The dimensions found in this folder can be used with any of the fact tables in the business area folders that include that related dimension. For example, Products from the Navigation path folder can be used with any of the fact tables (Returns, Sales, and Sales Targets). Cognos Analytics will use the correct join path based on the shortcuts used to join to the fact tables.

The model is multilingual ready (French and English) by using a language translation file to translate the metadata and macros to dynamically select the desired language column based on the content locale of the user. For multilingual data, there is a separate column for each supported language. One example of the macro is:

#'SLS_PRODUCT_LINE_LOOKUP.PRODUCT_LINE_'+ queryValue('Language_Lookup_csv.Language_', 'Language_Lookup_csv.Locale=' + sq($runLocale))#

The macro builds up the identifier value SLS_PRODUCT_LINE_LOOKUP.PRODUCT_LINE_ and tacks on the correct language value at the end of the string such as EN. $runLocale indicates which content locale was selected by the user, which is used in the filter portion of the queryValue function. This function allows a modeler to lookup a value from a column in a table. In this example, the table is 'Language_Lookup_csv and the value is taken from the column called Language_. The row chosen is based on the filter value on the column called Locale which is equated to the aforementioned $runLocale session parameter.

For more details about the approach of this model, you can read the Metadata Modelling best practices below.

https://www.ibm.com/docs/en/cognos-analytics/latest?topic=modeling-metadata-guidelines

Sample Setup Steps:

- The model is based on the Cognos Analytics sample GOSALESDW database and requires you to setup the database in one of the supported vendors (DB2, SQL Server, or Oracle). For more information on setting up extended samples which include the original models with multilingual support, see the following link:
  https://www.ibm.com/docs/en/cognos-analytics/latest?topic=samples-downloading-extended

- Once you have the sample database available in your environment, create a Data Server connection called **great_outdoors_warehouse** to the database and load the metadata from the **gosalesdw** schema as per the following instructions:
  https://www.ibm.com/docs/en/cognos-analytics/latest?topic=servers-creating-data-server-connection
  https://www.ibm.com/docs/en/cognos-analytics/latest?topic=servers-loading-metadata

- Upload the following files from this downloaded sample to a location in the Cognos Analytics portal.
    - **GOSALESDW Data Module - Translation File.xslx**
    - **Language Lookup.csv**

- Create a new data module and select the data server and schema you just prepared.

- Click **Select tables**, click **Next**, and then click **OK** as you will not need to select any tables.
  You will now load the data module schema in this sample download.

- On your keyboard, press **Ctl+Q+/** at the same time.
  This will open the data module specification window.

- Click the **Edit** icon, select and delete the contents of the window, and then paste in the contents of the **Data Module Data Server Spec.txt** file from this downloaded sample.

- Click **Save**. You will be asked to reload the page. Click **Reload**.

- At this point, you will likely need to relink the data module sources to the uploaded files. Click on the **Sources** tab in the top left corner, right-click on any sources displaying an error, and select **Relink**. Navigate to the corresponding file and click **OK**. Repeat to relink any remaining broken files. If the Gregorian calendar needs to be relinked, it is part of the **Samples** deployment that ships with the product.

- Now the data module should be ready for use.

For any issues with this model, please contact accelerator@ca.ibm.com.